

**GUJARAT TECHNOLOGICAL UNIVERSITY****M. E. Sem. – II<sup>nd</sup> - Examination – June/July- 2011****Subject code: 1721104****Subject Name: Automotive Chassis & Body Engineering****Date: 27/06/2011****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is wind tunnel? Enlist various types of wind tunnels and explain any one with neat sketch. **07**
- (b) Explain terms: (i) dash board (ii) bonnet (iii) boot. **07**
- Q.2** (a) Explain typical car body construction with neat sketch. **07**
- (b) Write short note on driver's visibility with neat sketch. **07**
- OR**
- (b) Explain preliminary design of vehicle bodies. **07**
- Q.3** (a) Explain design of automobile body for safety. **07**
- (b) Write short note on "Chassis frame design" **07**
- OR**
- Q.3** (a) State and explain various forces and moments acting on auto vehicle. **07**
- (b) Explain in brief flow visualization techniques. **07**
- Q.4** (a) List different vehicle body materials and explain any three of them. **07**
- (b) Write short note on Vehicle Aerodynamics. **07**
- OR**
- Q.4** (a) Explain shear panel method for vehicle body design. **07**
- (b) Explain stress analysis of bus body structure under bending and torsion. **07**
- Q.5** (a) Differentiate between symmetric and asymmetric vertical loads in a car. **07**
- (b) Explain distribution of load on vehicle structure. **07**
- OR**
- Q.5** (a) Explain classification of automobile coach work. **07**
- (b) Explain the general requirements of automobile body. **07**

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